PATENT SPECIFICATION

410,808

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Complete Accepted: May 23, 1934.

PROVISIONAL SPECIFICATION.

Improvements in Joint Fittings for the Supporting Poles of Sun Umbrellas and Similar Articles.

I, THOMAS SIDNEY SMITH, a British Subject, of Charles Street Works, Charles Street, Walsall, Staffordshire, do hereby declare the nature of this invention to be as follows:—

Sun umbrellas are extensively used on the beach and in the garden, and comprise substantially a pole supporting a canopy, and the invention relates to such of the kind in which the supporting pole is provided with a joint whereby the upper part of the pole can be set at an angle to the lower part of the pole to tilt or incline the canopy.

The invention provides the hereinafter described improvements in the joint fittings for such a pole applicable also to poles for other articles.

The umbrella pole is preferably of wood, but the joint fitting is of metal, and provides at each end of it a socket into which the wood pole portions are inserted and fixed. The joint comprises two knuckle-forming plugs contacting each other at opposed ends by close fitting inclined faces at an angle to the normal axis of both plugs, which axis is parallel and in line. These two plugs are held to each other with the inclined faces abutting by a pivoting pin directed at right-angles to the inclination of the faces and concentric therewith, so that the two plugs can revolve about this pivoting pin with the faces in close contact. The inclination of the faces determines the inclination of the canopy of the umbrella. The plugs revolve about the pivoting pin half a revolution and therefore to two positions, the one with the axes of the plugs parallel and in line, and the other with the axes at an angle. The one plug is rigidly attached to a tubular socket to receive the one wooden member of the pole, and the other plug is fitted within a tubular socket adapted to slide over both plugs, to which socket is rigidly attached the other wooden member of the pole. When the two sockets are abutting at their adjacent ends the slidable socket embraces the two plugs and holds them axially parallel and in line, so that the pole is a straight pole. [Pri...

When the slidable socket is slid off the fixed plug, the plug carried by the slidable socket can revolve relative to the fixed plug about the pivoting pin, which sets the particular part of the pole at an angle to the other part, canting or inclining the canopy. There is a telescoping action of the slidable socket in relation to the two plugs and such is utilised for fixing the pole rigid and straight, and for releasing the plugs so that they may be relatively revolved to set the upper portion of the pole inclined to the lower portion.

It is preferable to arrange a bayonet slot in the slidable socket, and a peg in the slidable plug carried thereby, so that a part revolution of the slidable socket, while embracing the two plugs, secures the socket against accidental movement, and this may be with a snap action. The fixed plug may have a collar upon it abutting against the end of the fixed socket, and when the pole is straight the slidable socket abuts against this collar. The fixed plug can be secured to its socket by cross-pins, while the slidable plug is simply a good fit within the socket but under control of the bayonet slot and pin. The pivoting pin for the two plugs can conveniently be a headed bolt and nut with a spring washer between, maintaining some considerable friction between the opposed inclined faces of the two plugs. The sockets may be provided by lengths of tube and the two knuckle-forming plugs by castings or stampings. Instead of the supporting pole being a wooden one it may be formed by metal tube in which case the two sockets would be provided by adjacent ends of the tube, with the joint fitting disposed and applied between them.

Dated this 22nd day of November, 1932.

For the Applicant:

GEORGE T. FUERY,
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COMPLETE SPECIFICATION.

Improvements in Joint Fittings for the Supporting Poles of Sun Umbrellas and Similar Articles.

I, THOMAS SIDNEY SMITH, a British Subject, of Charles Street Works, Charles Street, Walsall, Staffordshire, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to a joint fitting for the supporting pole of a sun or other umbrella extensively used on beaches and in gardens, of the kind in which a pair of hollow plugs, adapted to receive pole portions, have inclined contacting faces pivotally connected together at their opposed ends to enable the axis of one plug to be set at an angle to the other plug by a relative pivotal movement. Spring plungers have been employed for frictionally holding the plugs both co-axially and inclined to each other.

The object of the invention is to provide an improved joint of the kind referred to, and according to the invention, a telescopic sleeve is combined with one plug and is adapted to receive the pole portion of the umbrella and to slide over the other plug to cover the joint and to positively hold the plugs in axial alignment, in which position the runner of the umbrella sliding on the pole portion can slide over the sleeve, and the one plug is adapted to be inclined relatively to the other by pivotal movement when the sleeve uncovers the joint.

A further feature of the invention consists in applying the pivot pin from open ends of the hollow plugs and in combining a tubular pole portion of the same diameter as the telescopic sleeve with the other plug so that when the joint is covered by the telescopic sleeve the fitting has a common diameter over which the runner of the umbrella can slide, thereby enabling the umbrella to be closed or collapsed without detaching it from the fitting.

In carrying the invention into effect according to the preferred arrangement, the one plug fits within a telescopic sleeve adapted to slide over both plugs for holding them axially and linearly, and for releasing them for relative revolution to set the one plug at an angle to the other. The other plug is rigidly secured to a sleeve, both sleeves constituting sockets for the reception of pole portions which may be of wood or metal. The telescopic sleeve, slidable over both plugs, has a bayonet joint with the one plug so as to permit of the plugs and sleeves being fixed in axial alignment against inadvertent movement.

Preferably the contacting opposed faces of the plugs are pivotally connected together by a screw threaded bolt and nut with a spring washer interposed between them, a lock nut being fitted if desired.

The preferred construction of the invention is represented by Figs. 1 to 6 of the accompanying drawings on which similar numerals of reference denote corresponding parts throughout the several views.

Fig. 1 is an elevation of the joint fitting fixed in a vertical position.

Fig. 2 is a vertical section of Fig. 1.

Fig. 3 is an elevation of the joint fitting after the telescopic locking sleeve has been moved to permit of the one plug being pivoted with respect to the other.

Fig. 4 is a vertical section of Fig. 3.

Fig. 5 is an elevation of Fig. 3 after relative rotation has taken place between the plugs

Fig. 6 is a vertical section of Fig. 5.

The joint comprises a hollow cylindrical plug 1 and a hollow cylindrical plug 2 having opposed closed abutting ends 3 set at an angle to the axis of the plugs so as to present a pair of contacting faces about which the plugs are pivotally connected by the pin and nut 4, 5, the pin passing through concentric holes 6 in the inclined closed ends 3 so that the disposition of the pin 4, which is concealed, is at right angles to the plane of said inclined abutting ends. A spring 7 is preferably included at the pivotal joint so as to provide a frictional resilient joint. A sleeve 8 is secured to the plug 2 by the diametrically arranged pin 9, said sleeve 8 in combination with the plug 2 forming a socket for the reception of the lower pole portion (not shown) either of wood or metal adapted to support the umbrella either from a pedestal or by being stuck, by force, into the ground.

A sleeve 10 of substantially the same diameter as the sleeve 8 is telescopically mounted on the plug 1, said sleeve being slotted at 11 to co-operate with a peg 12 secured on the exterior of the plug 1, so as to form a bayonet joint. The sleeve 10 also forms a socket within which the upper pole portion carrying the umbrella or the

like (not shown) is secured.

In Figs. 1 and 2 the telescopic sleeve 10 embraces both plugs 1 and 2, the bayonet joint 11, 12 maintaining the engagement against inadvertent movement, so that the respective plugs are positioned in axial alignment. Thus the runner of an umbrella can pass over the joint thereby allowing the umbrella to completely collapse without being detached. By sliding upwardly the sleeve 10 both plugs are partially uncovered, whereby the plug 1 can be pivotally moved with respect to the plug 2 within 180° to incline the combined sleeve and socket 10 with respect to the socket 8, as particularly shown in Figs. 5 and 6.

The position of the sleeve 10, Figs. 1 and 2, ensures that the joint is maintained vertically against inadvertent movement, whereas when the upper portion of the pole is inclined the lower edge of the sleeve 10 can abut against the periphery of the plug 2 for support.

Preferably the plug 2, fixed to the socket 8, is provided with a collar 13 against which the socket 10 abuts when the pole is straight. The pivot pin and spring provide considerable friction between the opposed inclined faces of the abutting ends 3 of the respective plugs, but it may be desirable to serrate the inclined faces in order to create additional friction.

It will be observed that when the telescopic sleeve 10 covers the inclined joint 3, positively holding the plugs in alignment, the external diameter of the sleeves is substantially the same so that the runner of an umbrella frame may slide over the joint.

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is:—

1. A joint fitting for the supporting pole of a sun or other umbrella, of the kind hereinbefore set forth, wherein a telescopic sleeve is combined with one plug and is adapted to receive the pole part of the umbrella and to slide over the other plug so as to cover the joint and positively hold the plugs in axial alignment, in which position the runner of the umbrella sliding on the pole portion can slide over the sleeve, and the one plug is adapted to be inclined relatively to the other by pivotal movement when the sleeve uncovers the joint.

2. A joint fitting for the supporting pole of a sun or other umbrella, of the kind hereinbefore set forth, wherein a pivot pin is applied from open ends of the hollow plugs, a telescopic sleeve is combined with the one plug and is adapted to receive the pole portion of the umbrella and to slide over the other plug to cover the joint, and a sleeve of substantially the same external diameter as the telescopic sleeve is fixed to the other plug, so that when the telescopic sleeve covers the joint it holds the plugs positively in axial alignment and permits of the runner of an umbrella sliding on the pole portion to slide freely over the sleeves, whereas when the joint is uncovered the one plug is adapted, by pivotal movement, to be inclined relatively to the other.

3. A joint fitting according to claim 1 or 2 wherein a spring or other friction device is combined with the pivot pin.

4. A joint fitting according to any one or more of the preceding claims wherein the telescopic sleeve has a bayonet joint connection with its associated plug.

5. A joint fitting according to any of claims 2—4 wherein the lower plug is provided with a collar against which the upper telescopic sleeve abuts when the plugs are in axial alignment.

6. The improved joint fitting for a sun umbrella constructed, arranged and adapted to operate substantially as hereinbefore described with reference to the accompanying drawings.

Dated this 27th day of September, 1933.

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Fig. 1.

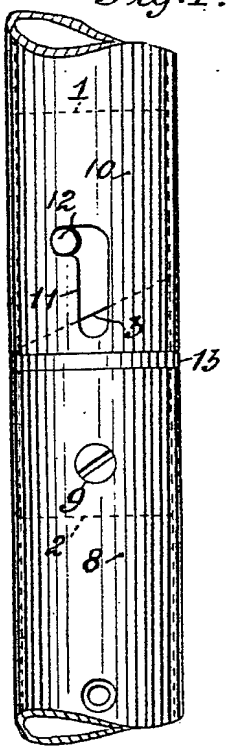


Fig. 2.

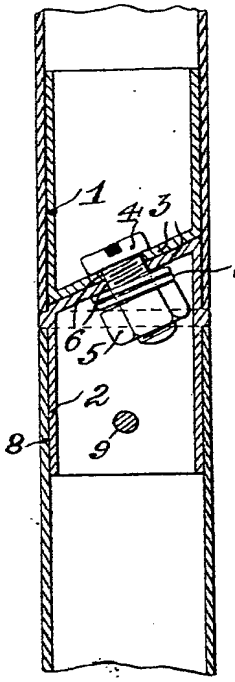


Fig. 3.

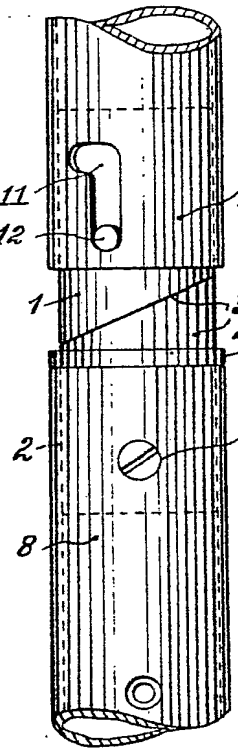


Fig. 4.

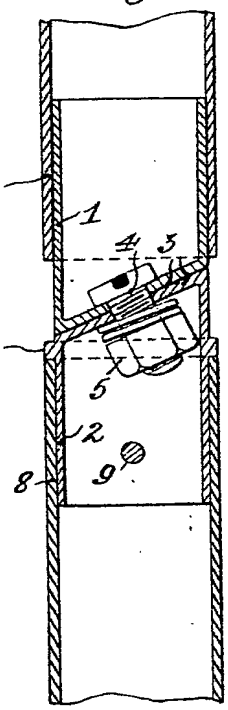


Fig. 5.

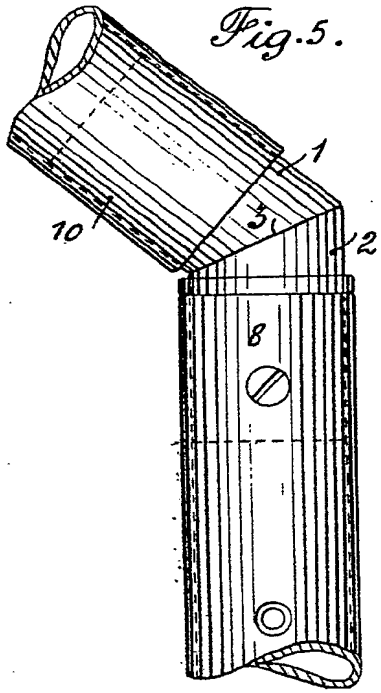
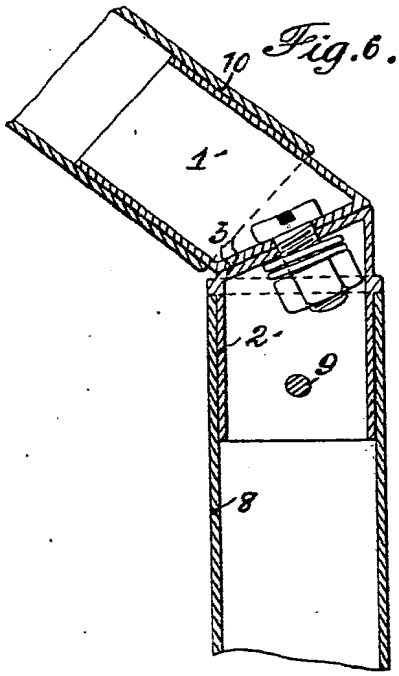


Fig. 6.



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